portfolio

— OF —





*Notices Subtilities



*Animal lover



*Quirky



*Whimsical

KOMAL SHARAN*
ROLL NO -2025114

"COLOUR ISN'T DECORATION. IT'S MEDICATION."

1. IKEA AR Experience
2. UX Accessibility Design
3. Sample Sketches
4. Skills

INSTA **BEHANCE**

Enhancing IKEA's Assembly Experience through AR

A study of how IKEA engineers emotion across every touchpoint — and where it breaks.

> ***"To create a better everyday life for many people"***
>
> IKEA is the lead producer of eco-friendly, affordable, ready-to assemble home furnishing products.

CORE VALUES

- Simplicity
- Sustainability
- Cost-conscious
- Renew & Improve







BRAND POSITIONING



MISSION

To offer a wide range of well-designed, functional home furnishing products at prices that as many people as possible can afford.

CORE VALUES

IKEA's vision is deceptively simple — beautiful, functional living for everyone. Built on five democratic design pillars (form, function, quality, sustainability, and low price), the brand has turned flat-pack furniture into a global cultural phenomenon. Its blue-and-yellow identity signals calm optimism — by design.

Three worlds, one brand

IKEA doesn't just sell furniture — it sells an experience across three distinct environments, each carefully engineered to keep you engaged.

CONSUMER TYPES

BUYER
Solo visitor · Couple shopping

EXPERIENCER
Gen-Z groups · Millennial couples

THE TENSION
One link in this chain consistently breaks — the assembly experience.

IN-STORE

A one-way maze designed so every customer walks past everything. Room ensembles make you feel at home before you've bought a thing.

The cafeteria is placed mid-journey — a strategic pause. Arrows on the floor guide a curated "vision quest" through the entire store.

One-way path
Room displays
Cafeteria



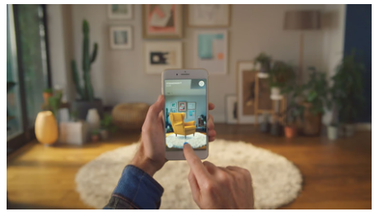


DIGITAL

The IKEA Place AR app lets you visualise furniture in your space before buying. Flexible ordering lets you shop how you want.

3D renderings of 3,000+ products. Buy online, pick up in store, or get home delivery. Built around how people actually browse on mobile.

AR placement
3D renders
Omnichannel





IN-HOME

The IKEA Effect — the psychological bond formed when you build something yourself. Assembly is designed to feel like an achievement.

Wordless semiotic manuals designed by "Communicators" who assemble each product themselves first — ensuring clarity across all languages.

IKEA effect
Semiotic manuals
DIY pride



Manuals That Can Be Understood in Any Language*

SENSORY MODALITIES ENGAGED

Visuals
Auditory
Tactile
Kinesthetic

Where the experience falls apart

After a 3-hour store trip, customers go home to a 32-page wordless manual, look-alike parts, and no real-time help.

USER PERSONA

RIYA
Teacher · Mumbai

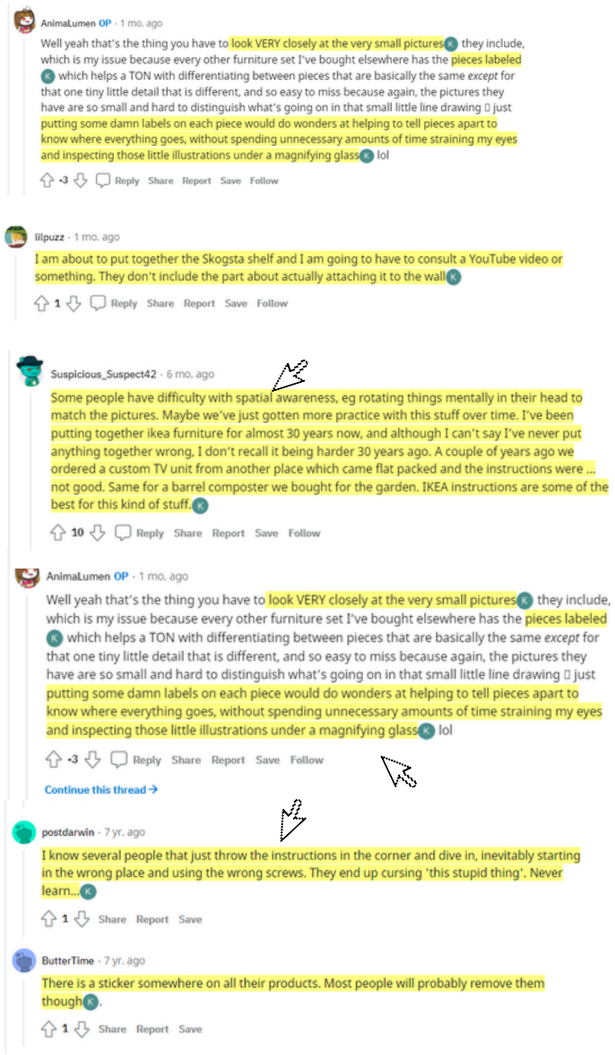
High taste | Tight budget | No spare time

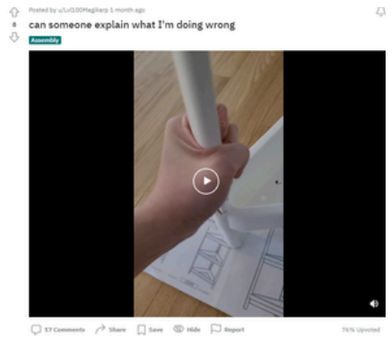
- Needs instructions she can actually follow
- Wants a home that reflects who she is
- Can't afford assembly help

PROBLEM STATEMENT

The gap isn't in the store or the app — it's in the 45 minutes on the living room floor.

USER RESEARCH — REDDIT





> I found that labeling the pieces was one of the most highly requested features along with YouTube video guides, QR, screw sizes in odd perspective illustrations .

KEY INSIGHTS

01
Labelling pieces was the single most requested improvement across all feedback sources.

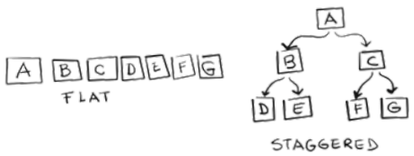
02
Video guides are already being sought externally — users turn to YouTube because the manual fails them.

03
Flat hierarchy in the manual presents too many steps at once, causing decision paralysis.

04
Screw identification in odd-perspective illustrations is a consistent point of confusion.

Hick's Law

More options presented at once = slower decisions = frustration. Progressive disclosure — grouping steps — could dramatically reduce cognitive load.



The ikea instructions use flat hierarchy which risks overwhelming the user with too many options.

AR assembly assistant

A feature extension for the IKEA app that turns your smartphone into a real-time assembly guide.

USER FLOW

- Home screen
- Search / scan barcode
- Product screen
- Manual view
- AR tool
- AR tool + progress tracker

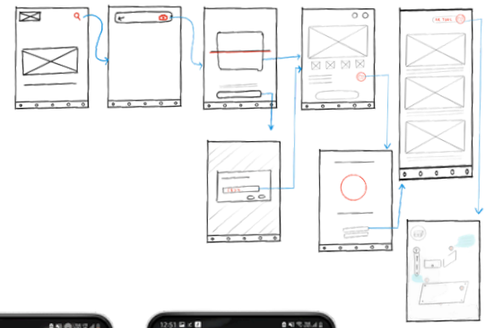
OUTCOME

The IKEA Effect only works when assembly doesn't defeat you first. This feature preserves the pride of building — it just removes the unnecessary pain.

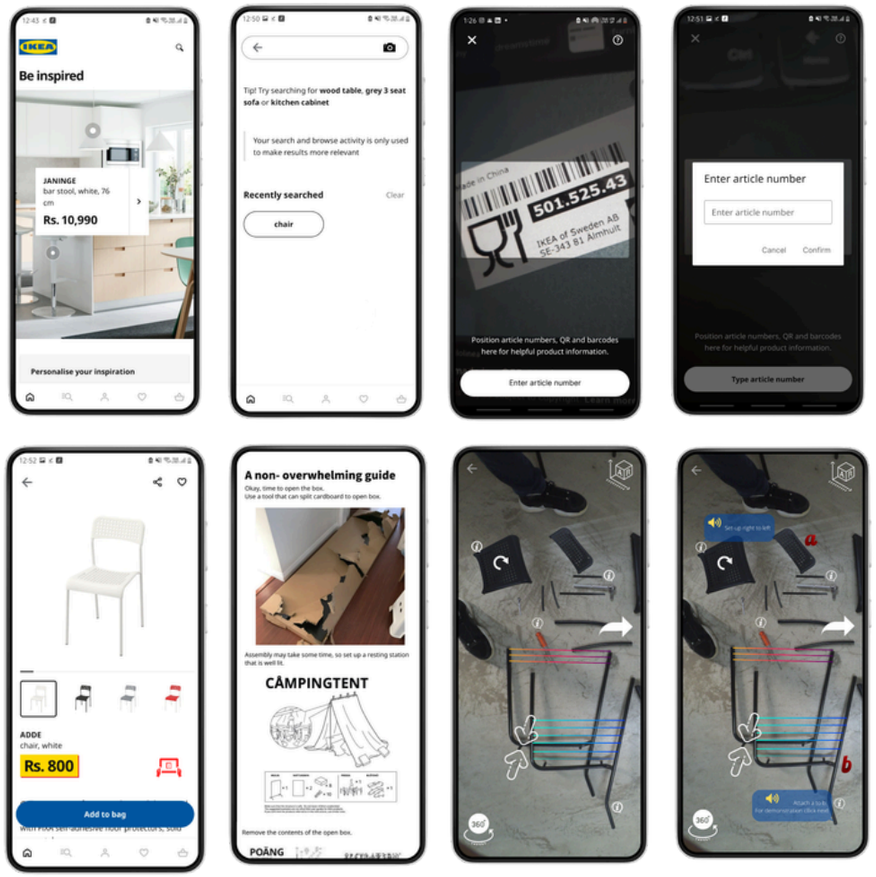
THE SOLUTION

Scan the product barcode → AR overlays labeled parts, directional arrows, screw guidance, and audio cues directly onto your physical space.

LOW - FIDELITY SCREENS



AR PROTOTYPE SCREENS



KEY FEATURES

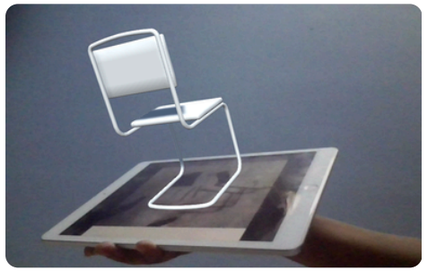
Barcode scan
Scan any IKEA product to instantly pull up its manual and AR guide.

Labeled parts
AR overlays identify and label each piece in real space, no more guessing.

AI assistant
Point at the step you're stuck on AI gives real-time visual and audio guidance.

Progress tracker
A status bar keeps you on track without overwhelming you with all steps at once.

[▶] Watch AR Prototype



Final assembled AR view of the chair

Device - **Built on Unity**
Device - Android & iOS
Environment - Physical Space & AR

01

PROJECT

UX ACCESSIBILITY DESIGN

Designing an inclusive learning system for autistic children in school environments

FIGMA DETAILED RESEARCH FILE

THE TENSION

Children with autism are placed in systems designed for neurotypical behaviour, *not designed for them.*

METHODS

- Field Observation
- Expert Interviews
- Secondary Research
- Affinity Mapping

TEAM

Komal · Subhadra · Nimisha
Saloni · Sneha · Odelia · Swarna



CONTEXT + RESEARCH OVERVIEW

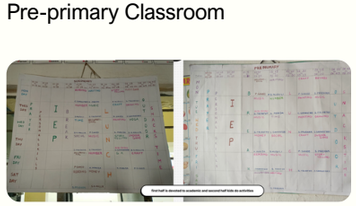
Checkout the Figma file

Three spaces. One broken system.

Schools are not just learning spaces; they are systems where physical, cognitive, and emotional accessibility intersect. For children on the autism spectrum, these systems fail at every level.



- Pre-primary Classroom



- Weekly Schedules - First half is dedicated to studies and second half kids do activities

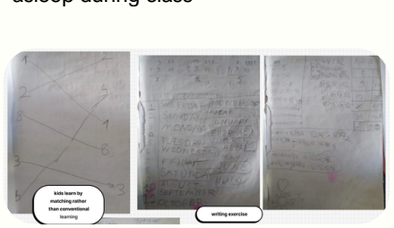
Pre-primary

Early environments rely on visual cues and guided interaction, but accessibility is improvised, not designed.





- Kids feel drousy and fall asleep during class



- kids learn by matching rather than conventional learning

Secondary

Information density increases but clarity does not. High cognitive load from inconsistent teaching aids.





- Kids that have high level AUTISM needs assistance



- kids press with lots of pressure

Hostel

Living spaces lack structured accessibility. Safety, hygiene, and ease of movement are afterthoughts.

02

RESEARCH

INSIGHTS → OPPORTUNITIES

Three themes emerged from field visits, interviews at Chetana, and caregiver research.

CORE FINDING

The system is built for normalised behaviour, but users operate in variable emotional and cognitive states.

Teaching gaps

Teachers at Chetana use flashcards, physical prompts, reward systems, and repetition — but tools are improvised, not systematic.

Individual effort fills gaps the system should address by design.

01 PHYSICAL ENVIRONMENT

Unsafe movement

Stairs, washrooms, hostel corridors — none designed for safe or assisted movement. Infrastructure is functional, not accessible.

Children navigate dangerous spaces daily without support.





02 LEARNING ENVIRONMENT

Visual clutter

Blackboards, charts, and classroom aids all carry equal visual weight. Nothing signals what to look at first — no hierarchy, no guidance.

High cognitive load at every moment of structured learning.





03 CAREGIVER ECOSYSTEM

Support systems missing

Caregivers are the most essential part of this system — and the most unsupported. There is no off switch. The job doesn't end at 6pm. There is no weekend.

Exhaustion → Invisibility → Burnout





FOUR CORE INSIGHTS FROM RESEARCH

Insight 01

Children learn through sensory input and doing — not through watching or abstract instruction.

From: gains/pains mapping, interview at Chetana — music, touch, visual cues, repetition all drive learning

Insight 02

Emotional stress peaks exactly when information is least clear — at moments of cognitive demand.

From: user journey map — emotional dips correlate with unstructured, high-load learning moments

Insight 03

Accessibility is physical, cognitive, emotional, and instructional — not a single-dimension problem.

From: affinity mapping — four touchpoint categories, all failing independently

Insight 04

The support system has no support system. Caregivers are overwhelmed, isolated, and under-resourced.

From: Helping Hands gains/pains — post-partum depression, stigma, expensive therapy, no peer community

03

SYNTHESIS

CONCEPT + SOLUTION DIRECTION

From raw observations to design direction, what we learned and what it opens up.

> MINDSET SHIFT
>
> Stop designing for neurotypical behaviour with accessibility patches. Start designing for variable cognitive states from the ground up.

WHAT WE ARE INCLUDING

- Mild ASD
- Relatable approach
- Region Specific
- Language specific

WHAT WE AREN'T INCLUDING

- Extreme Autism
- Combination extreme Autism

DESIGN OPPORTUNITIES

Interactive, sensory, gamified learning tools that adapt to individual IQ and age, not a one-size curriculum.

Structured digital classroom tools smart board, student profiles, progress tracking to replace improvised methods.

A community platform connecting parents sharing stories, resources, expert access, and peer support.

THREE-PILLAR PRODUCT DIRECTION

Smart classroom tool

Teacher-facing smart board with student profiles, IQ-adaptive skill modules (academic, personal, functional, social, recreational), progress tracking, and PEC-based visual communication in Indian regional languages.

Interactive learning for kids

Gamified, sensory-driven modules - animated brushing steps, matching exercises, reward animations, AR-assisted real-world generalization. Error messages as animated characters. No time pressure.

Caregiver community

Gamified, sensory-driven modules - animated brushing steps, matching exercises, reward animations, AR-assisted real-world generalization. Error messages as animated characters. No time pressure.

Design principles

No intensive color. Sans-serif fonts. Large touch targets. Noticeable guidance before/during/after every input. Vibration feedback. No time limits. White space as a feature — not dead space.

PRIORITISATION — MOSCOW MATRIX

MUST HAVE

FAQ / Q&A
Post creation
Blogs
Search
Personal profile
Chatting / DM

SHOULD HAVE

Resource maps (doctors, stores)
Chatbots

COULD HAVE

Onboarding
Donation
NGO collab
Hosting events
Broadcasts

WON'T HAVE

Academic tutorials
School collab
Desktop version
3rd party ads

04

DIRECTION

CONCEPT + SOLUTION DIRECTION

What this project would become if designed end-to-end.

SOLUTION STATEMENT

An umbrella learning medium for schools and home - interactive, immersive, and built for variable cognitive states.

Accessibility Guidelines- User Interaction Front

- Navigation and Layout- Consistent
- Large text size
- Understandable
- Clutter and distraction- Minus(No ads)
- Enough white space- directs users attention correctly
- Text- simple, no jargons,no idioms, simple language and correct grammar
- Control over site behaviour- max
- No time limits- automatic refresh whenever possible- clear message

USER - PERSONAS



The Helping Hand

Asha Kumar, 34

Assistant professor

Bhubaneswar

Bio:

Asha is an assitant professor at the Chetana Institute for the Empowerment of Person with Intellectual Disability, she looks **after children with Autism,** learning disabilities and ADHD. She is passionate towards her job and has a lot of **empathy** and always wants to help children with disabilities

Needs:

- Create a **learning environment** that helps students grow using digital mediums as autistic children learn better through **visual aid**
- To decrease **cognitive load,** by shifting focus and observing more on the progress and behavior of students
- to **personalise** teaching methods for each students

Frustrations:

- Difficulties in **finding out triggers** of children
- Unable to pay **close attention** to every child in the classroom
- Difficulty in **keeping track of students' progress** and learning curve



Child with Autism

Arjun Panda,13

Student

Bhubaneswar

Bio:

Arjun is a child with Autism Spectrum Disorder. He likes to draw in books that let him connect the dots and help him finish the drawing. He faces difficulty in doing day-to-day task easily and takes time to understand concepts in Maths and Science

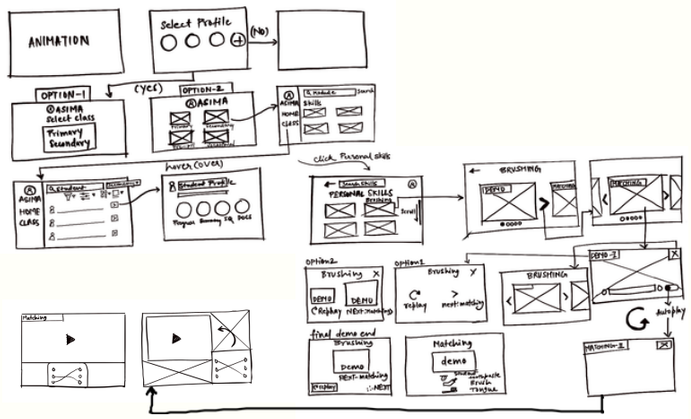
Needs:

- wants **real life examples** that he can refer to while doing an activity
- Needs **constant practice** everyday to get used to the activity in a consistent manner
- Requires an **evaluative system** to understand where he is going wrong and what can he do to perform the activity with ease.
- learns better with visuals

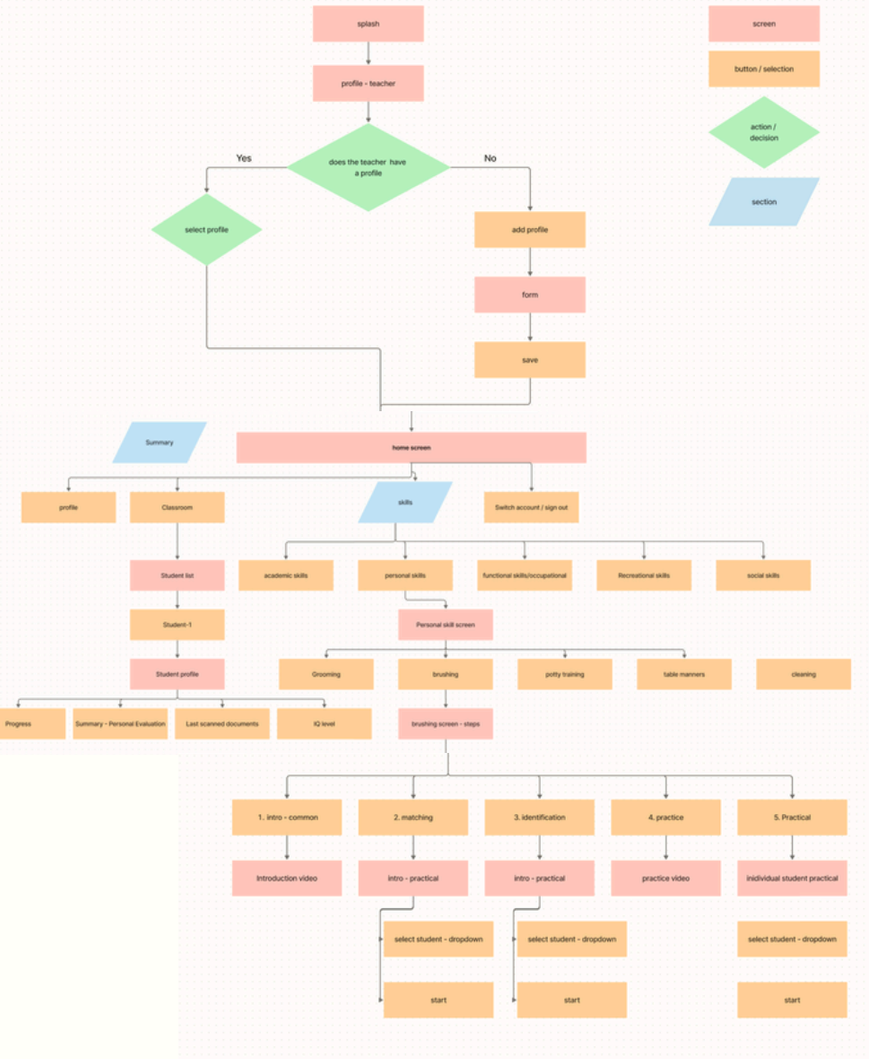
Frustrations:

- Difficulty to see or understand things that use **intensive color** usually distracts and gives anxiety
- **Constant outbursts** of energy and not able to pay attention

LOW FIDELITY



INFORMATION ARCHITECTURE



















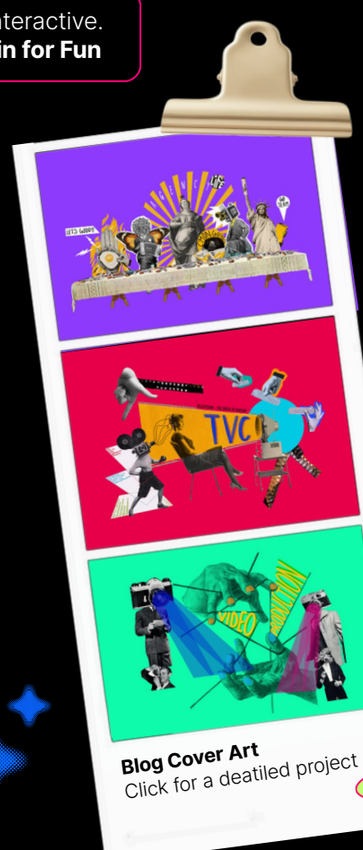


Designing for **human–dog co-existence**

It's interactive.
Tap in for Fun













"MY BRAIN RUNS LOW ON DOPAMINE (ADHD), SO I MAKE THINGS THAT OVERDOSE ON COLOUR"



Material Exploration & Craft



weaving + wood cutting

functional lamp

clay sculpting





Air-dry Clay modelling



PAINTING
Upcycled waste wood and sold them as pen holders



KEYCHAINS
exploring differnt kinds of knots



Form Exploration & Display

Visual Display





corset made out of BANDAGES



DRAPING
Upcycled old mannequins & waste muslin cloth

Fashion Styling & Makeup



Hair, Makeup & draping

Explorative Makeup



FASHION SHOW
At National Museum, Odisha

BTS

Photography & Art Direction



OUTDOOR Shoot





VIDEO Documentatioon *Craft-Ganjifa cards*



Garment construction & Makeup



PHOTO EXHIBITION



STUDIO Shoots